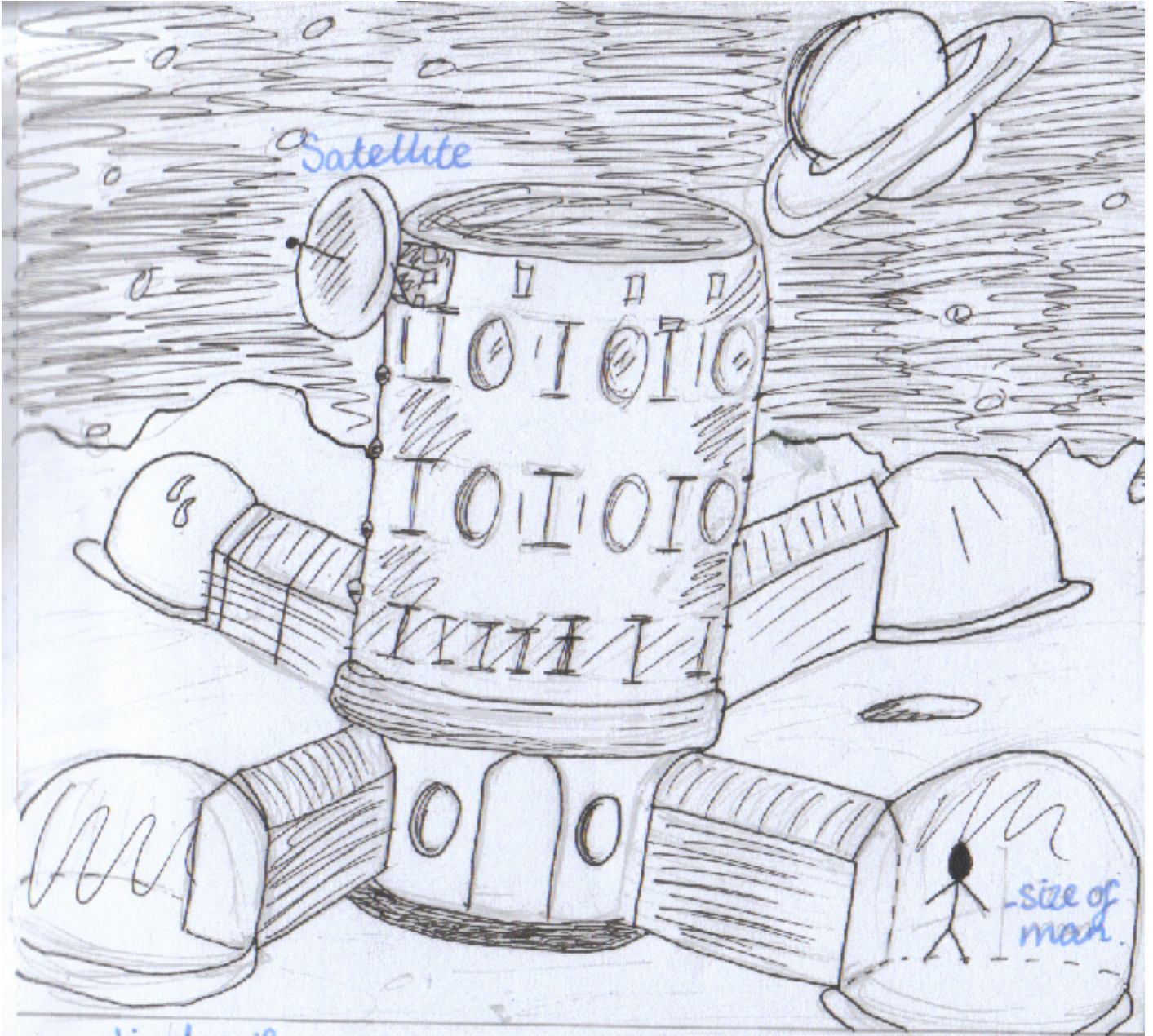


Celia

Space Station Prototype



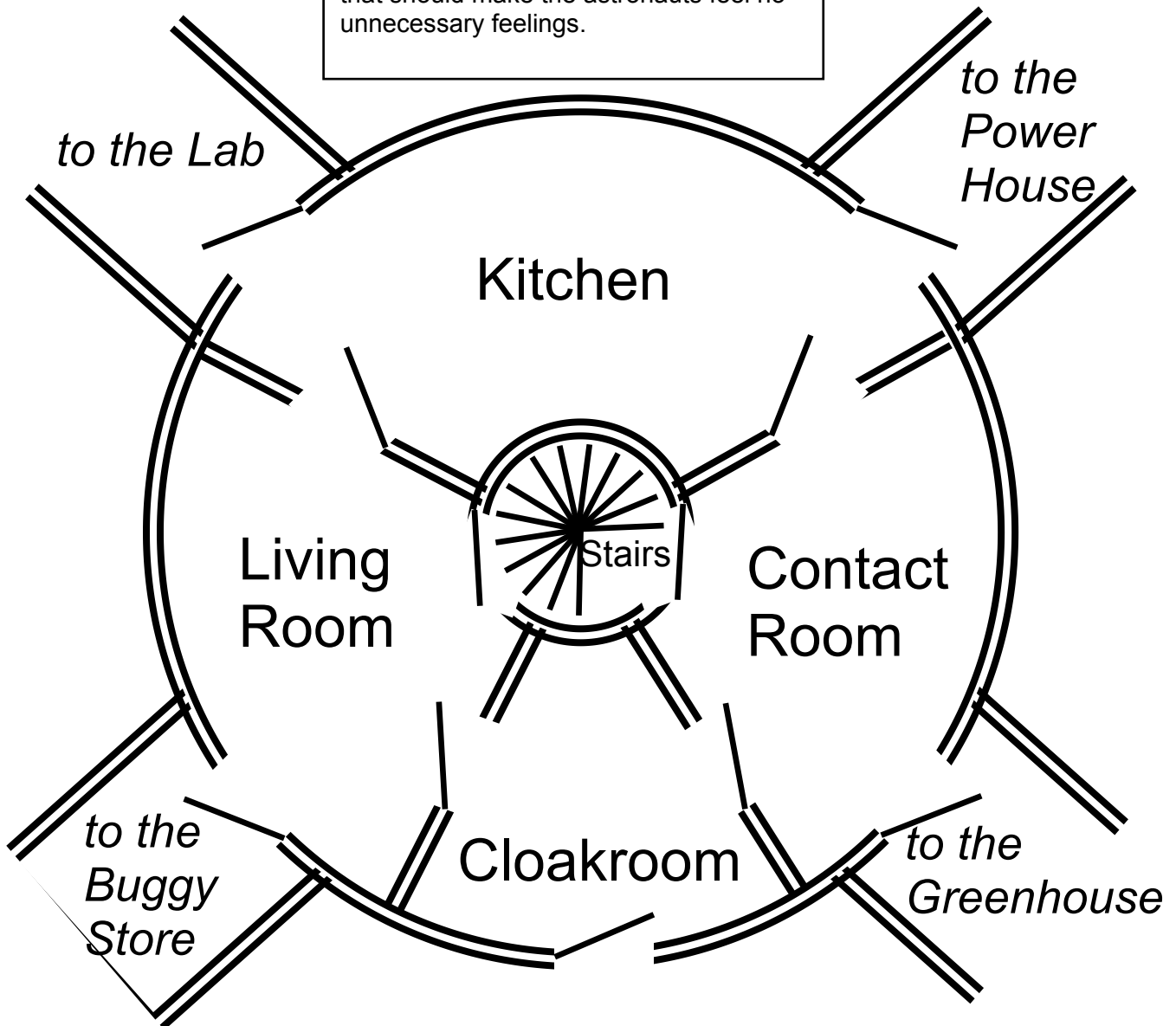
*by Alice Faux-Nightingale
S. Peter's Collegiate School
Wolverhampton*

Layout

Ground Floor

The Kitchen

The kitchen has all of the necessary items i.e. a cooker and fridge etc. but all of them are programmed to run on as little energy as possible. Also there is a table that will seat 4, and a laminate, easy to clean floor. The kitchen will be white, which is a basic, neutral colour that should make the astronauts feel no unnecessary feelings.



Living Room

This has easy chairs, a space to relax and chat, during their free time. It also contains books, games and a video screen for DVDs (TV signals would not be very strong on the moon) This room will be painted sky blue to cool down the astronauts mentally and help them to relax.

Contact Room

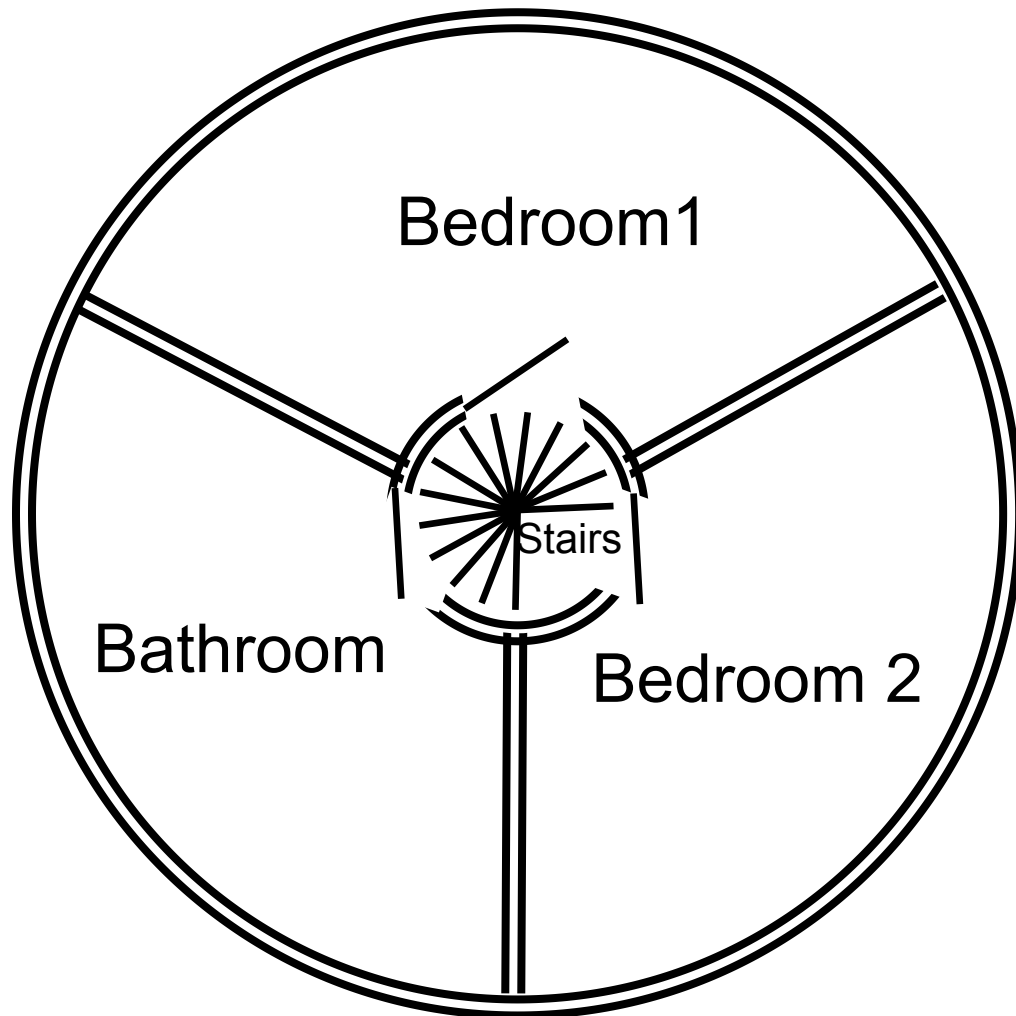
This contains equipment to communicate with incoming spacecraft and a virtual reality conferencing room. Here people can spend time in virtual reality with friends and family back on earth.

Layout

First Floor

Bedroom 1

This is going to be painted green because green makes the body feel relaxed, and slightly wild, therefore making the astronauts ready to go out for the day.



Bathroom

There will be an on suite toilet facility with each bedroom but to limit the amount of waste water the bath and shower facility will be in one room. The room will be painted blue to cool the astronauts when they are relaxing.

Bedroom 2

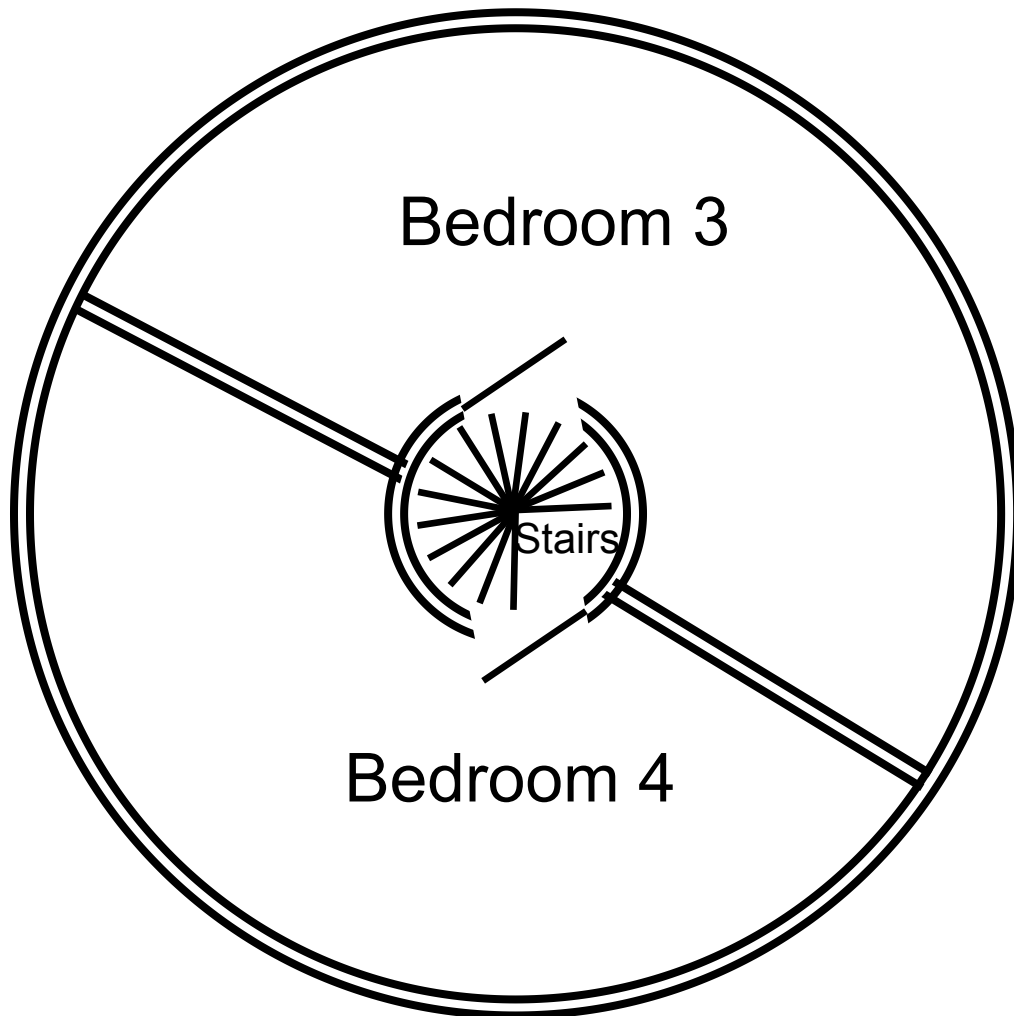
This room is going to be painted yellow because yellow is said to make a person feel warm, and if a person feels warm, they go to sleep quicker, making them feel ready to go to work the next day.

Layout

Second Floor

Bedroom 3

This is going to be painted baby blue because unlike blue, it makes the person feel warmer, which means that the astronaut will go to sleep quicker and have more energy for work the next day.



Bedroom 4

This room is going to be painted orange which is said to make a person feel warm, and if a person feels warm, they go to sleep quicker, making them feel ready to go to work the next day.

Food System

Greenhouse

Our greenhouse is going to provide all of the food that the astronauts will eat while living in the station. We will grow mainly English fruits which are hardy and can survive in most conditions. To grow these we will either use the method of hydroponics, or Crystal soil (jelly that absorbs water and then releases it with plant food, slowly when necessary.) The kind of plants that we will grow are:

Herbs: Mint Chives Fennel Sage Lavender

Trees: Soya (for milk) Apple Plum Walnut

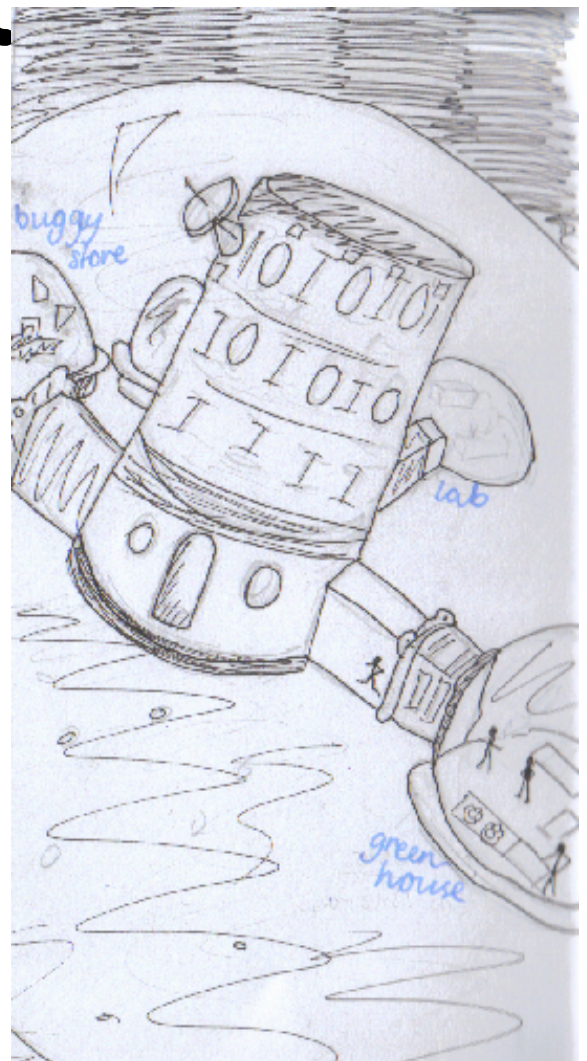
Plants: Wheat Rice Carrots Spinach Cabbage Onions
Sunflowers (for oil) Raspberries Strawberries Beans



Energy System

The Power Plant

The power for the whole complex is supplied by a hydrogen powered generator. Hydrogen and oxygen are supplied in pressurised tanks from Earth. The oxygen is used to maintain the atmosphere in the space station and to burn the hydrogen. Hydrogen is very explosive and is used as a fuel to generate electricity. The only byproduct of this reaction is water which is needed both for people and for the crops that are being grown. There would also be a bank of solar panels supplying power, as it is always day on the bright side of the moon. These could supply a base level of power. When even this level is not needed the constant supply could be used to release and collect hydrogen and oxygen, through electrolysis. This system would give the astronauts a low level self sufficiency which might be needed if there was a problem getting more supplies from earth.



Other Small Units

The Lab

The Lab is made so that the astronauts can make an analysis of anything that they find on the moon straight away. This would allow a wide range of experiments to be carried out without having to refer back to earth all the time. The lab has air tight doors to allow the astronauts to go out on to the moon's surface. It also has an isolation corridor so that it can be sealed off from the rest of the station if there is an emergency.

The buggy store

The buggy store is the room in which all the vehicles and larger equipment needed out on the moon's surface is stored. The whole store is an air lock so that it can have large doors to allow vehicles in and out when needed.

Protective Dome

Geodesic Dome

This dome, is there to protect the space station from asteroids and the main amount of luna dust/wind that could damage some of the machinery that the astronauts use. It is made out of triangles, for strength and there are alternate material used. The top eight triangles, are going to be kevlar, which is very strong, and ensure that if the dome gets hit from above, then it won't break. Further down, there are triangles made from thick plastic, which allows light to pass through without the asteroids. Using this idea, means that if one of the triangles breaks, then it will be the only triangle that breaks, which is very useful when trying to survive beneath this dome.

